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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,476

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Jong-Goo Lee

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EXAMINER

THERIAULT, STEVEN B

ART UNIT

PAPER NUMBER

2179

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/743,476	LEE ET AL.	
	Examiner	Art Unit	
	Steven B. Theriault	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 109-141 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 109-141 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the following communications: Amendment filed 11/21/2007.

This action is made Final.

2. Claims 1 –7, 109-141 are pending in the case. Claims 1 and 122 are the independent claims.
Claims (142-179) and claims 8-108 have been cancelled.

Terminal Disclaimer

3. The terminal disclaimer filed on 11/21/2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 10/933,583 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Drawings

4. The drawings remain objected to as failing to comply with 37 CFR 1.84(p)(5) because they still include errors. In the replacement drawings Figure 9a includes the numbers 9 that refers to an action manager. For example, the same number 9 refers to a "AI Creature Simulated" in figure 9b. In the same drawings, #10 refers to an agent/avatar action in 9a and 10 refers to all actions in 9b. There are several other errors just within these two drawings and the Examiner again requests the applicant to review each drawing for duplicate numbers and review the specification in conjunction with each drawing to ensure that the numerous errors in numbering are eliminated.
Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 109-141 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffberg et al. (hereinafter Hoffberg) U.S. Patent No. 6400996 issued June 4, 2002.

In regard to claims 1-7 and 109-121, claims 1-7 and 109-121 reflect the interface comprising computer readable instructions for performing the method steps of claims 122-141, respectively, and are rejected along the same rationale.

In regard to **Independent claim 122**, Hoffberg teaches a method for a proactive interaction between a user and a computational device through a user interface, the computational device having an operating system, the method comprising:

- Detecting a pattern of user behavior according to at least one interaction of the user with the user interface by using a learning module (See column 10, lines 15-31 and several incorporate pattern recognition patents (See column 42, lines 20-67 and column 50, lines 50-67).
- Proactively altering at least one function of the user interface according to said pattern (See Figure 15, and column 85, lines 5-67). Hoffberg teaches an interface that the user interacts with and that the system modifies based on the detected input pattern

With respect to **dependent claim 123**, Hoffberg teaches the method wherein said at least one pattern is selected from the group consisting of a pattern determined according to at least one previous interaction of the user with said user interface, and a predetermined pattern, or a combination thereof (See column 51, lines 7-15).

With respect to **dependent claim 124**, Hoffberg teaches the method wherein said user interface features a graphical display and said altering at least one function of said user interface comprises altering at least a portion of said graphical display (See Figure 15 and column 51, lines 55-67 and column 52, lines 35-45).

With respect to **dependent claim 125**, Hoffberg teaches the method wherein said altering at least a portion of said graphical display comprises:

selecting a menu for display according to said detected pattern; and displaying said menu (See

column 144, lines 25-42 and Figure 15 and column 90, lines 20-40).

With respect to **dependent claim 126**, Hoffberg teaches the method wherein said selecting said menu comprises: constructing a menu from a plurality of menu options (See column 116, lines 15-67 and Figures 15-18).

With respect to **dependent claim 127**, Hoffberg teaches the method wherein said user interface features an audio display and said altering at least one function of said user interface comprises altering at least one audible sound produced by the computational device (See column 60, lines 59-67, column 94, lines 43-65 and column 119, lines 20-67).

With respect to **dependent claim 128**, Hoffberg teaches the method wherein the computational device is selected from the group consisting of a regular computer, an ATM, a cellular telephone, a mobile information device, a PDA, or a consumer appliance having an operating system (See column 51, lines 40-45, column 39, lines 35-45 and column 147, lines 30-35).

With respect to **dependent claim 129**, Hoffberg teaches the method wherein said learning module comprises a knowledge base, and the method further comprises holding information gathered as a result of interactions with the user and/or the operating system by using said knowledge base (See Figure 18, 1807 and column 117, lines 20-67).

With respect to **dependent claim 130**, Hoffberg teaches the method wherein said knowledge base comprises a plurality of integrated knowledge determined from the behavior of the user and from preprogrammed information (See column 56, lines 40-51).

With respect to **dependent claim 131**, Hoffberg teaches the method wherein said learning module further comprises a plurality of sensors, and uses said sensors to perceive a state of the operating system (See column 99, lines 1-15 and 40-55).

With respect to **dependent claim 132**, Hoffberg teaches the method wherein said learning module further comprises a perception unit, and uses said perception unit to process output from said sensors and determine a state of the operating system and a state of said user interface (See figures 15-18 and column 50, lines 50-67 and column 125, lines 30-67).

With respect to **dependent claim 133**, Hoffberg teaches the method wherein said learning module further comprises a reasoning system, and uses said reasoning system to update said knowledge base and learn an association between an alteration of said user interface and a state of the operating system (See column 126, lines 44-67 and Example 12, column 119).

With respect to **dependent claim 134**, Hoffberg teaches the method wherein said learning module further comprises at least one of an artificial intelligence algorithm and a machine learning algorithm, and the method is performed by the learning module (See column 42, lines 27-67 and column 132, lines 10-20).

With respect to **dependent claim 135**, Hoffberg teaches the method wherein said learning module maximizes a percentage of proactive alterations leading to a direct user selection from said alteration (See column 51, lines 63-67 and 52, lines 1-26).

With respect to **dependent claim 136**, Hoffberg teaches the method wherein said maximization is performed through learning reinforcement (See column 51, lines 63-67 and 52, lines 1-26 and column 55, lines 58-67 and column 56, lines 1-22).

With respect to **dependent claim 137**, Hoffberg teaches the method wherein said learning reinforcement is performed through an iterative learning process (See column 51, lines 63-67 and 52, lines 1-26 and column 55, lines 58-67 and column 56, lines 1-22).

With respect to **dependent claim 138**, Hoffberg teaches the method wherein each iteration of said learning process is performed after said alteration has been performed (See column 53, lines 19-40 and Examples 12-14).

With respect to **dependent claim 139**, Hoffberg teaches the method wherein said proactively altering at least one function of said user interface comprises activating an additional software application through the operating system (See column 131, medial devices that interact with the system have additional software installed to measure the bio feeds of the user.)

With respect to **dependent claim 140**, Hoffberg teaches the method wherein the method is performed using an intelligent agent capable of communicating with a human user (See example 12-14, column 119-120).

With respect to **dependent claim 141**, Hoffberg teaches the method wherein said intelligent agent controls at least one interaction of the computational device over a network (See Examples 12-14 and Example 17, column 125-126).

It is noted that any citation to specific pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

Response to Arguments

7. Applicant's arguments filed 11/21/2007 have been fully considered but they are not persuasive.

Applicant argues that Hoffberg does not suggest or teach proactively altering a function based on a detected pattern

Applicant argues that the prior art of Hoffberg does not teach or suggest a process of modifying a function of the interface based on a detected pattern because they do not interpret the teachings of figure 15 nor the text of column 85 of providing at least one method of modifying a function of an interface based on a detected pattern (See arguments page 3).

The Examiner disagrees.

First, the Examiner would like to point to the extensive background section of Hoffberg that lists several pattern recognition patents that provide for altering a broadly recited function of the interface. All of which are incorporated by reference and provide ample support for the prior art teachings of adaptive interfaces. Second, the reprogramming steps that the applicant refers to are performed directly after the user has selected a function for the purposes of eliminating unnecessary input steps in the future. Further down in column 85, Hoffberg teaches that each screen may be optimized for the prescribed function. Supporting the feature and in the same embodiment Hoffberg expressly teaches that the purpose of the invention is to use an intelligent and adaptive pattern recognition process to modify choices available to the user on the display. The interface predicts the user inputs via a past history, context of use and through adaptive rules (See column 51, lines 5-67). Hoffberg also teaches several related patents and further states that

adaptive menus can be achieved by optimizing the interface through context clues, dynamically modifying the functions on the interface through shortcuts and reducing the amount of selections the user must perform in subsequent operations (See column 52, lines 1-55). Moreover, Hoffberg teaches that system has a generic interface presented as a default to the user and through progressive iteration the interface features are modified (See column 56, lines 22-47, specifically lines 40-49). Third, while the process diagram of figure 15 by itself may just simply refer to a set of steps, it is the steps that are described in several sections of the Hoffberg reference, all of which support the steps of figure 15 and provide evidence as to the structure of Hoffberg that meet the claim.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven B. Theriault whose telephone number is (571) 272-5867. The examiner can normally be reached on M, W, F 10:00AM - 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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